FUNGIFAMA

August 2016. Table of Contents

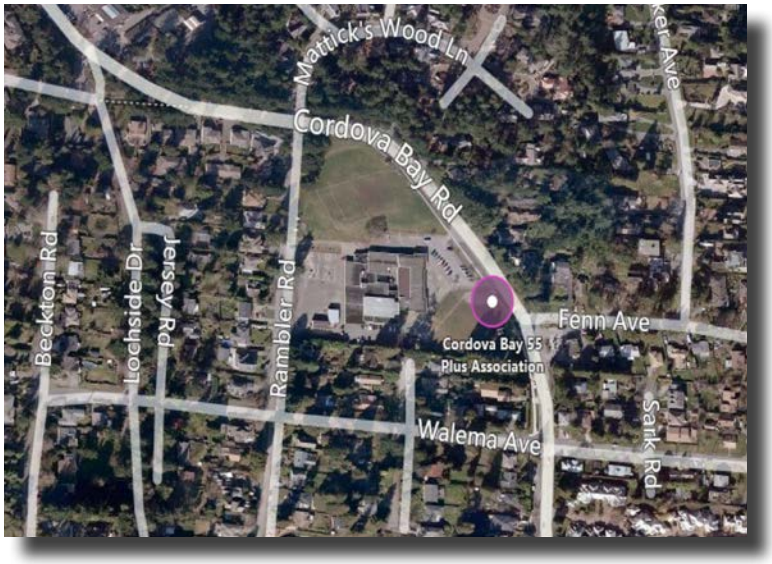
Photo by Jeff Laird

PREZ SEZ

By Bruce Pendergast

SVIMS was incorporated under the Societies Act on July 8, 2016. This was my highest priority for the year so I can relax now. Most outdoor clubs like ours are registered as this provides protection for members through policies and procedures for safety on forays as well as making the club legally responsible rather than individual board members. Many thanks are due to member Jamie Hall and his company Reed Pope which provided the registration service free of charge so the total cost for the club was less than $200.

A second change to note this year is the location of the Fall mushroom show. We all loved going to the Swan Lake site for the show, but it was clear we had outgrown it the last few years as we were sometimes five deep around the display tables. The new site is the Cordova Bay Plus 55 Center. Thanks to Ben Hirkock for being show organizer and Pauline Cohen for finding the site. Hope to see you all there.



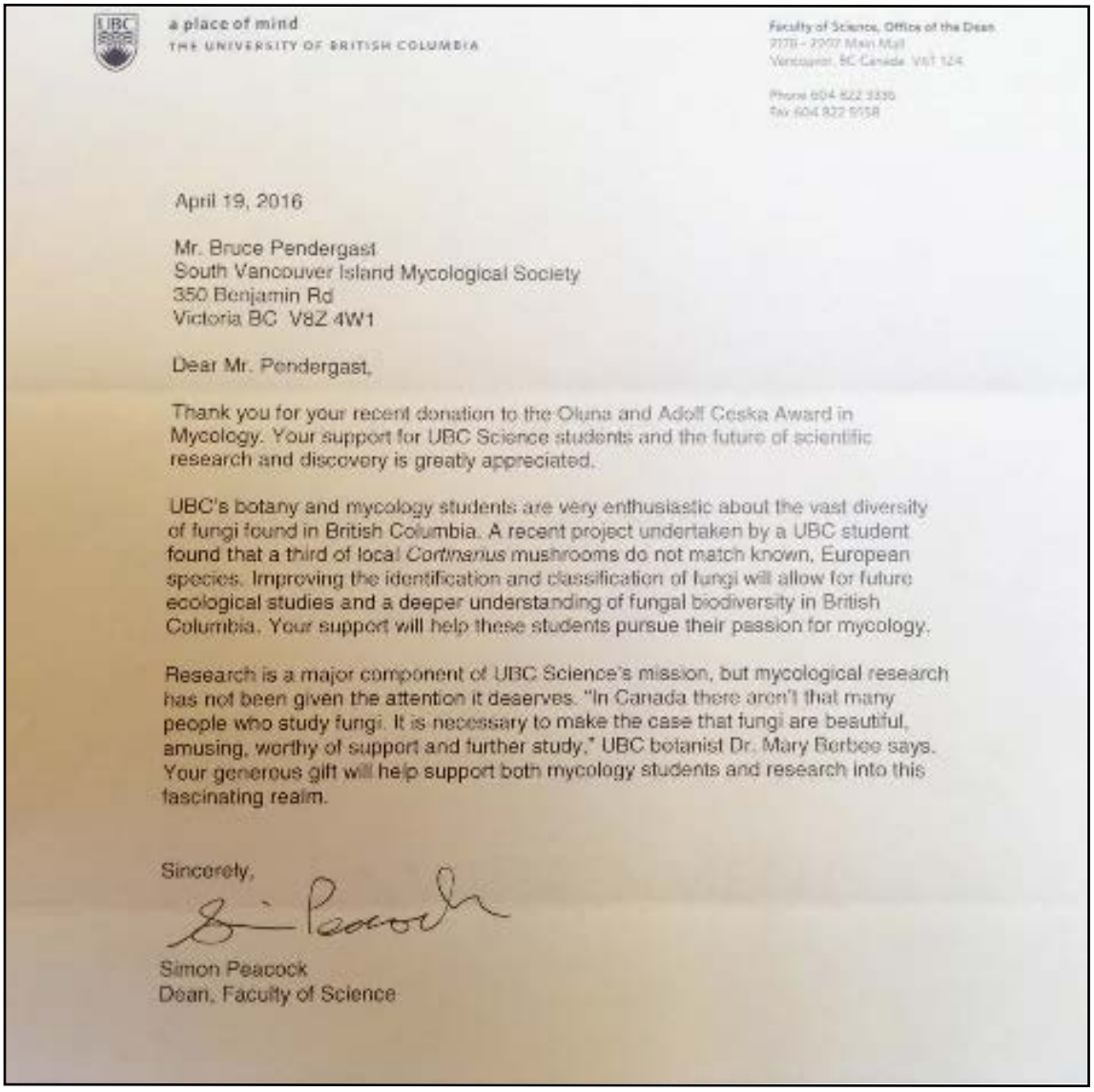
Send Fungifama your photos, articles, comments and ideas!

The next deadline for submissions is September 30

email fungifama@gmail.com

THE COVER ILLUSTRATION IS A DEPICTION OF "FUNGUSMAN", A MYTHOLOGICAL CHARACTER IN HAIDA LORE. THE PIECE WAS GENEROUSLY PRODUCED AND DONATED TO FUNGIFAMA BY ARTIST SHAWN O'KEEFE, AND IS INSPIRED BY THE WORK OF CHARLES EDENSHAW. SHAWN HAS BEEN THE ARTISTIC POWERHOUSE BEHIND PHILLIPS BREWING AND MALTING CO. SINCE ITS INCEPTION. HE RUNS ARTIFICIAL FLAVOUR GRAPHIC ENGINEERING, A VICTORIA-BASED DESIGN COMPANY. HIS ART IS ONE PART IRREVERENT PSYCHEDELIA, TWO PARTS REVERENT PACIFICANA. YOU CAN FIND MORE OF SHAWN'S WORK AT WWW.TRUST36.CA.

A Response to The Oluna and Adolf Ceska Award in Mycology from UBC's Dean of Science



a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Science, Office of the Dean
2178 – 2207 Main Mall
Vancouver, BC Canada V6T 1Z4

Phone 604 822 3335
Fax 604 822 5158

April 19, 2016

Mr. Bruce Pendergast
South Vancouver Island Mycological Society
350 Benjamin Rd
Victoria BC V8Z 4W1

Dear Mr. Pendergast,

Thank you for your recent donation to the Oluna and Adolf Ceska Award in Mycology. Your support for UBC Science students and the future of scientific research and discovery is greatly appreciated.

UBC's botany and mycology students are very enthusiastic about the vast diversity of fungi found in British Columbia. A recent project undertaken by a UBC student found that a third of local *Cortinarius* mushrooms do not match known, European species. Improving the identification and classification of fungi will allow for future ecological studies and a deeper understanding of fungal biodiversity in British Columbia. Your support will help these students pursue their passion for mycology.

Research is a major component of UBC Science's mission, but mycological research has not been given the attention it deserves. "In Canada there aren't that many people who study fungi. It is necessary to make the case that fungi are beautiful, amusing, worthy of support and further study," UBC botanist Dr. Mary Berbee says. Your generous gift will help support both mycology students and research into this fascinating realm.

Sincerely,

Simon Peacock
Dean, Faculty of Science

To donate to this fund and support student research in mycology in BC contact Valerie Titford at UBC, 604-822-3404

UPCOMING EVENTS

Date	Event	Place	Cost
Sept. 1	SVIMS Meeting with Guest Speaker: Fred Rhoades. "Some Unusual Things About Common Mushrooms"	PFC, 19:00 to 21:00	Free to SVIMS members
Sept. 11	Mushrooms: An Introductory Course For Adults (Session 1: Intro to Mushrooms. Instructure: Andy Mackinnon)	Swan Lake, 19:00 to 21:00	$20 for SVIMS members, $25 otherwise. 10% discount if registered for all 5 classes
Sept. 24 - 25	Salmon and Mushroom Festival 2016	Lake Cowichan Centennial Hall, 10:00 to 16:00	$2 - children free
Sept. 27	UVic's Fungi and Plants Series: "Mycorrhizas, Mushrooms and Plants: What does it Mean?" by Kem Luther	UVic Campus 18:30 to 20:30	$21 plus tax, registration necessary
Sept 28	East Sooke book launch: Boundary Layer, by Kem Luther (see website for other book-related events happening around the PNW and coastal BC)	East Sooke Community Hall 19:00 to 20:30	Free
Oct. 4	UVic's Fungi and Plant Series: "Don't Trifle With Truffles: Fungal Economies and Ecosystems at the Root of BC Trees" by Shannon Berch	UVic Campus 18:30 to 20:30	$21 plus tax, registration necessary
Oct. 5	Mushrooms: An Introductory Course For Adults (Session 2: Mushroom Field Taxonomy 1. Instructor: Juliet Pendray)	Swan Lake, 19:00 to 21:00	$20 for SVIMS members, $25 otherwise. 10% discount if registered for all 5 classes
Oct. 6	Mushrooms: An Introductory Course For Adults (Session 3: Cooking with Wild Mushrooms. Instructor: Bill Jones.Lecture/demonstration/tasting.)	Swan Lake, 19:00 to 21:00	$20 for SVIMS members, $25 otherwise. 10% discount if registered for all 5 classes
Oct. 6	SVIMS Meeting with Guest Speaker: Noah Siegel. "Under Pressure: Evolution Oddities in the Fungal World"	PFC, 19:00 to 21:00	Free to SVIMS members
Oct. 7-9	Raincoast Institute Course: "Mushrooms of the West Coast", with Andy Mackinnon	Tofino	$240, registration necessary
Oct. 8	Fabulous Fungi - Guided Walk with Kem Luther	Francis King Regional Park, CRD 10:00 to 12:00 and 13:00 to 15:00	$7, registration necessary, call 250.478.3344.
Oct. 11	UVic's Fungi and Plant Series: "Parasites and Companions: The Strange Life of Mycoheterotrophic Plants" by Andy Mackinnon	UVic Campus 18:30 to 20:30	$21 plus tax, registration necessary
Oct. 12	Mushrooms: An Introductory Course For Adults (Session 4: Mushroom Cultivation. Instructor: Scott Henderson. Lecture/demonstration/hands-on practice.)	Swan Lake, 19:00 to 21:00	$20 for SVIMS members, $25 otherwise. 10% discount if registered for all 5 classes

UPCOMING EVENTS CONT'D

Oct. 14-16	8th Annual Sunshine Coast Mushroom Festival	Check Website	Check Website
Oct. 18	UVic's Fungi and Plant Series: "Fungal and Plant Ecosystems: System Thinking and the Balance in BC Forests" by Richard Winder	UVic Campus 18:30 to 20:30	$21 plus tax, registration necessary
Oct. 22	Mushrooms: An Introductory Course For Adults (Session 5: Mushroom Field Taxonomy 2. Instructor: Kem Luther. Place TBA. Students work on field identification skills in a local forest.)	TBA	$20 for SVIMS members, $25 otherwise. 10% discount if registered for all 5 classes
Oct. 22	UVic's Fungi and Plant Series: Field Trip to Mystic Vale	UVic Campus, 10:00AM to 12:00PM	$21 plus tax, registration necessary
Oct. 23	SVIMS Mushroom Show (**Change of Venue!)	Seaside Room, Cordova Bay 55+ Assoc. 1-5238 Cordova Bay Rd. 10:00 to 16:00	By donation
Oct. 23 - 27	HollyHock Course: "Mushrooms, Wild and Mysterious" with Paul Stamets	Cortes Island, WA	$545 USD
Oct. 28 - 30	SVIMS Cowichan Lake Foray	Cowichan Lake	TBD
Nov. 3	SVIMS Meeting with Guest Speaker: Britt Bunyard, "Diptera Strangelove. Or, How the fly learned to stop worrying about amatoxins and love the death cap."	PFC, 19:00 to 21:00	Free to SVIMS members
Nov. 4	Mechosin Bioblitz: Introductory Talk by Britt Bunyard	Metchosin Council Chambers: 19:00	Free
Nov. 5	Metchosin Bioblitz: forays, film fest and mushroom display	Metchosin District Office, 09:00 to 16:00	Free
Nov. 6	Walking the Boundary Layer, Guided Walk with Kem Luther	Francis King Regional Park, 14:00 to 16:00	$7, registration necessary, call 250.478.3344
Dec. 1	SVIMS Meeting with Guest Speaker: Marty Kranabetter, "Mushroom Studies in the Victoria Watershed"	PFC, 19:00 to 21:00	Free to SVIMS members

Don't Miss UVic's Fungi and Plant Series: From War to Welfare: The Strange Partnerships of Fungi and Plants

"Fungi and plants form partnerships that take many different forms. Some partnerships have developed in ways that seem to benefit the plants. In other plant/fungi hookups, the fungi appear to be exploiting the plants. Many of these relationships, however, have subtle tit-for-tat interactions between the partners. In this course, four Victoria scientists will lead us through the fascinating interface between the plants and fungi. When taking a walk through the woods of British Columbia, students who complete this course will look at plants and mushrooms in a new way."

This course consists of five stand-alone sessions: you can register for a single session or receive a discounted rate if you register for the entire series. (This course features SVIMS mycological heavyweights Kem Luther, Shannon Berch, Andy Mackinnon, and Richard Winder!) See calendar above for dates and website here for details.

PRESENTED BY: SVIMS - SOUTHERN VANCOUVER ISLAND MYCOLOGICAL SOCIETY &
SWAN LAKE CHRISTMAS HILL NATURE SANCTUARY

Wild MUSHROOMS

AN INTRODUCTORY COURSE FOR ADULTS

Wednesday, September 21, 7 to 9 pm
Introduction to Mushrooms - The essential elements of mushroom biology, uses and ID. Students should bring mushrooms to class for identification and discussion. Instructor: Andy MacKinnon

Wednesday, October 5, 7 to 9 pm
Mushroom Field Taxonomy 1 - An exploration of morphological features used in mushroom identification. Students should bring mushrooms to class for identification and discussion. Instructor: Juliet Pendray

Thursday, October 6, 7 to 9 pm
Cooking with Wild Mushrooms - Delicious ideas for bringing wild fungi into your kitchen. Tasting samples included. Instructor: Bill Jones

Wednesday, October 12, 7 to 9 pm
Mushroom Cultivation - Learn tips and techniques for growing your own mushrooms at home. Instructor: Scott Henderson.

Saturday, October 22, 2 to 4 pm
Mushroom Field Taxonomy 2 - Techniques for field identification of wild mushrooms. Location of the field trip will be announced to participants closer to date. Instructor: Kem Luther

$20 per individual class for Swan Lake and SVIMS members
$25 per individual class for non-members
10% discount if you register for all 5 classes - BEST VALUE!
$90 for members/**$112.50** for non-members
Please call **250.479.0211** or stop by the Nature House to register

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SWAN LAKE CHRISTMAS HILL NATURE SANCTUARY

Bamfield
Fungus Festival


Chanterelle


Meadow


Mica Cap


King Bolete

SEPTEMBER 15-18TH, 2016

THURSDAY, SEPTEMBER 15TH
6:00pm - Mushroom cooking demo by Bill Jones (at the firehall)

FRIDAY, SEPTEMBER 16TH
10:00am - Fungus themed arts and crafts (at the school)
2:00pm - Expert-led Fungus walk in the woods (meet in school parking lot)
7:00pm - 'Fungi and Forest Ecology in Barkley Sound' presentation by Andy MacKinnon (Venue TBD)

SATURDAY, SEPTEMBER 17TH
9:30am - Guided Fungus walk (Meet at Fisheries dock on the west side)
1:00pm - Fungus Lecture and workshop by Shannon Berch (Venue TBD)
7:00pm - Potluck dinner and live music (at the fire hall)

SUNDAY, SEPTEMBER 18TH
10:00am - Sunday Brunch (TBA)

Please RSVP to bamfieldfungusfestival@gmail.com

Bamfield Community School Association

GPO CHARTERS

bmsc BAMFIELD MARINE SCIENCES CENTRE

September SVIMS Meeting Speaker: Fred Rhoades

"Some common things about unusual mushrooms and some unusual things about common mushrooms: a 3D view of our friends"

Stereo pair of Fred Rhoades and the Black Morel Morchella elata (since re-named M. importuna*).*

Don't miss this one! This will be the first ever SVIMS presentation featuring 3D images and, perhaps more importantly, 3D glasses. Fred's talk will feature a selection of his macrophotographic and other views of northwestern mushrooms. These spectacular images are shown with a two-projector system (to project left and right stereo pairs) and viewed with 3D stereo glasses. We'll zoom into the world of mushrooms and look at some of their common features up close. And also look at some unusual features of some unusual fungi (and fungus-like organisms). So cool!

Fred Rhoades completed graduate studies in both mycology and lichenology with Bill Denison at Oregon State University, and George Carroll at University of Oregon. His Master's and PhD theses were about growth rates and population biology of the important, northwest foliose lichen, *Lobaria oregana*. From 1977 to 2009 he was an instructor of biology at Western Washington University in Bellingham where he taught a variety of courses until retiring. Fred currently lives in Bellingham, and continues to give occasional programs and weekend field workshops. He spends much of his field time photographing mushrooms, lichens, bryophytes, slime molds and the odd plant and animal.

Enjoying a Fred Rhoades presentation at the Pacific Northwest Key Council meetings (photo by Lee Whitford).

October SVIMS Meeting Speaker: Noah Siegel

"Under Pressure: Evolution Oddities in the Fungal World"

October's SVIMS Speaker (Thursday October 6) is Noah Siegel, author (with Christian Schwarz) of the fantastic new book 'Mushrooms of the Redwood Coast'. He will have copies of his book for sale at the SVIMS meeting.

Noah will speak about "Under Pressure: Evolution Oddities in the Fungal World". This entertaining lecture will highlight some fascinating fungal adaptations to conform to their environment, and reasons behind them, using stunning photographs of mushrooms from around the world.

Noah's field mycology skills are extensive – he has spent over two decades seeking, photographing, identifying, and furthering his knowledge about all aspects of macrofungi. He has hunted for mushrooms throughout the United States and Canada, as well as on multiple expeditions to New Zealand and Australia. He is one of the premier mushroom photographers in America, having won numerous awards from the North American Mycological Association (NAMA) photography contest. His technique and attention to detail are unrivaled, arising from a philosophy of maximizing utility for identification purposes while maintaining a high degree of aesthetic appeal. His photographs have appeared on the covers and have been featured in articles of multiple issues of FUNGI Magazine and Mushroom the Journal, numerous mushroom books, as well as many club publications. Noah travels and lectures extensively across America, following the mushrooms from coast to coast, and everywhere in between. Don't miss this fun evening with Noah Siegel!

Exciting Autumn Line-up of SVIMS Speakers

Mark your calendars for an exciting line-up of SVIMS speakers this autumn! SVIMS meetings are, of course, the first Thursday of each month. Thursday September 1 Fred Rhoades will present our first-ever 3D presentation (with 3D glasses!) on "Some common things about unusual mushrooms and some unusual things about common mushrooms" (see article this issue). What a terrific way to kick off the season! October 6 California's Noah Siegel will speak about "Under Pressure; Evolution Oddities in the Fungal World" (again, see article this issue). Noah will also have copies of his brand new book 'Mushrooms of the Redwood Coast' for sale. Thursday November 3 Fungi magazine editor Britt Bunyard returns with "Diptera Strangelove: Or, how the fly learned to stop worrying about amatoxins and love the death cap." Don't miss this raconteur and SVIMS favourite. And perhaps saving the best for last, December 1 features SVIMS' own Marty Kranabetter with an entertaining update on his research into mycorrhizal fungi ecology on southeastern Vancouver Island. So much to look forward to!

LICHEN *BRYORIA* WAS TOBY SPRIBILLE'S ROSSETTA STONE

By Adolf Ceska, reprinted from BEN: Botanical Electronic News, July 2016

Edible Horsehair Lichen, *Bryoria fremontii* (also called Wila by Native People), has been an important food for Native People of the interior parts of British Columbia and Washington (Turner 1977, Crawford 2007). When lichenologists studied this species, they found that Inedible Horsehair Lichen, *Bryoria tortuosa*, has the same fungal and algal components as its edible counterpart, *Bryoria fremontii.* The DNA analysis also confirmed that both lichen species are formed of the same fungal element (ascomycete *Bryoria*) and have the same algal symbiont (green alga *Trebouxia* simplex). Formally, these two different lichens should be treated as a single species, in spite of the fact that one of them is edible and the other toxic due to the high content of vulpinic acid.

Toby Spribille and University of Montana microbiologist John P. McCutcheon were not satisfied with this solution. They analyzed DNA of both the edible *Bryoria fremontii* and the inedible *Bryoria tortuosa* and they confirmed the already well known fact that both species had the same algal and fungal components (cf. Velmala et al. 2009). When they masked out the DNA of the algal and fungal common components from the DNA profile of the unedible *Bryoria tortuosa*, they saw DNA fragments that they identified as those of a basidiomycete yeast from the genus Cyphobasidium.

Eureka! While *Bryoria fremontii* is made up of only one fungal and one algal element with only occasional, scattered yeast cells present in the cortex, *B. tortuosa* has an abundance of the basidiomycete yeast *Cyphobasidium* growing in the lichen cortex.

Spribille and McCutcheon assembled a large team of scientists who tested many other fruticose and foliose lichens. They found that basidiomycete yeasts were present in many of the species they examined (Spribille et al. 2016).

Their discovery redefines our understanding of lichens although there are still many questions to be answered about the role the three components play in the life of lichens such as *Bryoria tortuosa*. The role of algae (or cyanobacteria in many other cases) is clear, but the action and interaction of the second fungal component has yet to be established. This new look at lichens would not have been possible without the discovery Toby Spribille et al. made. Congratulations to all of them!

References

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THE FUNGI WITHIN: AN INTRODUCTION TO THE HUMAN "MYCOBIOME"

by Thomas Witte

Perhaps you've already heard some of the sensational stories of the human microbiome: our bodies are writhing in bacteria! Our guts have over 100 trillion of them, making that big ol' belly one of the most microbially dense populations on Earth! Our own hard-working human cells are outnumbered by unicellular freeloaders by a factor of ten to one! Gut biomes can alter our moods, affect our susceptibility to disease, release nutrients from our food, increase our sexual vigor (...well, maybe). But what about the "mycobiome", our resident community of fungal organisms?

Work on the mycobiome is still in its infancy (the word itself was coined only six years ago), and shows an understandable bias towards identification of pathogenic fungi associated with disease and disorder. However, thanks to advances in molecular identification methods, scientists have expanded our knowledge of fungal diversity in our bodies. Today, environmental DNA sequencing focussing on fungal-specific sections of the genome have allowed researchers to look closely at that weird rash in your cousin's mouth - and in fact, they are just beginning to understand the vastly complex network of microbial relationships that gives rise to such rashes when thrown out of balance .

Fungi are found extensively throughout the human body (even in some brains, see last issue of Fungifama), but in low proportions compared to bacteria. For example, fungi are at least three orders of magnitude less common than bacterial cells in the human intestinal tract (less than .1% of genes found in the gut are of fungal origin). However, rare organisms in these circumstances often act as reservoirs, either as keystone species that interface with the microbiome (or the host immune cells), or as pathogens waiting for a chance to dine on another delicious SVIMS member buffet (Huffnagle and Noverr 2013, Suhr and Hallen-Adams 2015).

Of the fungal species currently residing in biofilms on your skin, sliding around in your mouth and stomach, or on your toes, armpits and unmentionables, many appear to be simply opportunistic invaders, waiting for a compromised immune system to open the door to infection -- or, as invasive microbes see it, a smorgasbord of nutrients. Unfortunately the big picture, long-term relationships between humans and their fungi are under-studied, and often suffer from researchers' lack of understanding of fungal ecology; hence the exaggerated reports of fungal diversity due to molecular detection(Suhr and Hallen-Adams 2015). Nevertheless, let's take a look at fungal diversity on a few of the best-studied body parts.

THE MOUTH

Our mouths harbor a diverse assemblage of fungi - one study revealed mouths are dominated mainly by *Candida* (a genus made famous for "thrush" and vaginal yeast infections), *Cladosporium, Aureobasidium, Saccharomycetales* (one of my favorite groups that includes brewer's yeast), *Aspergillus, Fusarium* and *Cryptococcus* (Ghannoum et al. 2010). Much of the reported diversity describes fungi which may not be colonizing our mouths, but are introduced environmentally via food, drink or breathed spores. Many of these are common moulds and sources of allergens, and some species can become seriously pathogenic given conditions of lowered immune defense, such as diabetes, AIDS, or cystic fibrosis. Additionally, many of the species found in our mouths wouldn't survive the harsh conditions of our acidic stomachs; however, the lungs are known to fall victim to fungal infections from time to time and, contrary to historical perspectives, are far from being sterile organs!

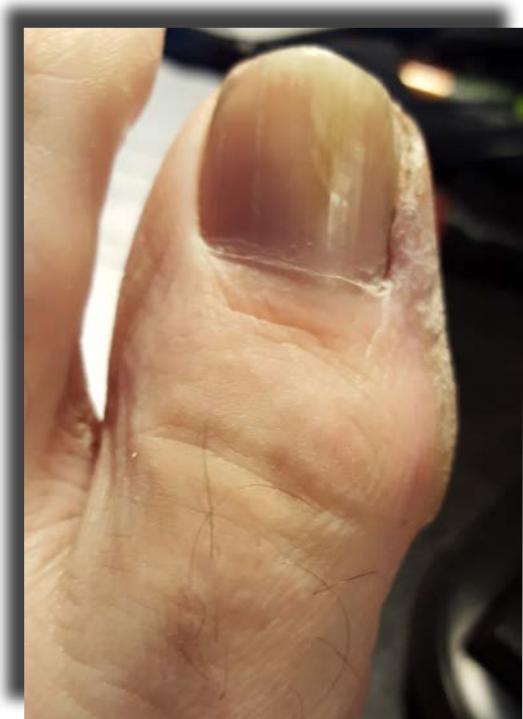
THE GUT

As of 2015, at least 267 fungal species have been reported in the gut, most of them found only once. Many of these could represent a chance ingestion of a fungal species resistant to digestion but having no significance to human health or ability to persist and form colonies (Suhr and Hallen-Adams 2015). The acidity of our upper digestive region is a very strong deterrent to most fungal invaders, and fungal diversity increases in a gradient along the length of our intestines, peaking at the colon and anus. The most commonly found species are: *Candida spp., Saccharomyces cerevisiae, Cladosporium cladosporioides, Penecillium allii*, and *Malassezia spp*. Ten of the twelve most commonly found species on humans are yeasts, and bacterial populations are instrumental in restricting their ability to overwhelm their habitats. One way they limit fungal growth is to bind fungal cell walls to prevent the formation of filamentous growth patterns.

THE SKIN

Malassezia species dominate our skin mycobiome for the most part, depending on the moisture level, nutrients and topography of the region being studied. *Malassezia* tends to subsist primarily on the lipids we secrete to keep our bodies' envelopes moist and supple. In some cases they can form superficial skin infections such as dermatitis, dandruff, or tinea versicolor. Areas with more fungal diversity include all parts of the foot, largely as a result of the higher moisture level and large surface area with plenty of nooks and crannies. It is hoped that medication can become more specifically targeted to localized sections of our immune systems, since wide-spectrum antibiotics and antifungals are collaterally destroying potentially beneficial communities in addition to the nasty ones (Findley et al. 2013).

All elements of the microbiome have been shown to help "educate" our immune systems in the production of specific defense compounds and signalling pathways - and some of the most fascinating studies attempt to characterize the stability of these communities over time and through periods of disease (Grice 2013). One thing is for sure - there are going to be some huge revelations in short order! It's an exciting time to be a mycologist.



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Surprising Smarts in Slime Country #USelection #dogsvomit

By Euan Thomson

With flattering names like Dog's Vomit, you would be forgiven for expecting little from slime molds in the way of creative problem solving. Prepare to be surprised and amused. These multinucleate (meaning many nuclei in one cell) single-celled organisms, which live as masses often large enough to slip on, have been surprising scientists in recent years with study results demonstrating increasingly complex behaviours. They are able to find their way through a maze, and use a Hansel and Gretel style memory system by which they leave a slime trail that later tells them which way they've explored for food. Not content to be confined into a simple if utterly disturbing fairy tale, slime molds were shown in a 2010 Science article to maintain transport networks for the movement of nutrients and communication chemicals within the megacell whose complexity the authors compared to the Tokyo rail system. For anyone who's ridden the Skytrain, well – you're thinking at a bacterial level.

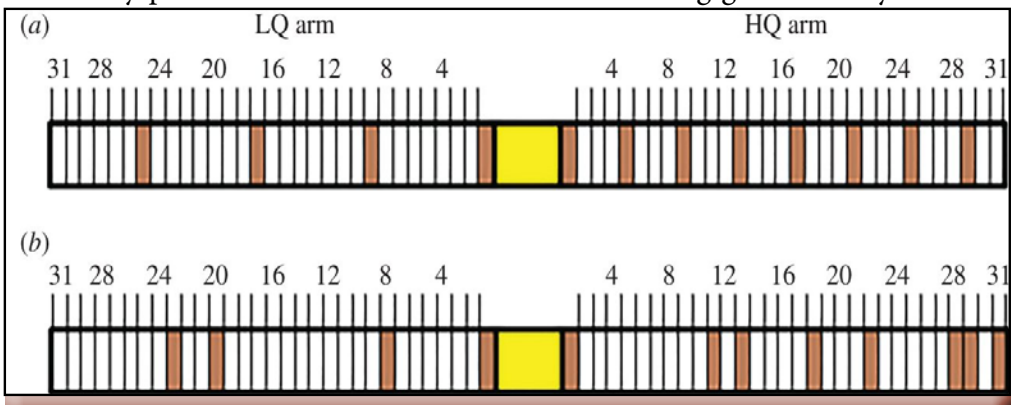
A study this June in the Journal of the Royal Society Interface demonstrated the first solving of the Two Armed Bandit problem by an organism lacking neurons. Named for the tendency of slot machine players to try out several machines until they settle on a "winner", the problem tests the exploration-exploitation trade-off an organism uses when searching for food and settling on a feeding ground in which to graze. The problem involves providing the organism with a choice between low quality (LQ) and high quality (HQ) feeding grounds with densities of food unknown to the organism. Grocery stores rely on our inability to solve this problem by positioning absolutely everything worthwhile (and unprofitable) around the outside of the store. (You mean I have to walk through a nutrient wasteland to get from the vegetables to the bakery section? WWSMD?)

This study positioned the slime mold cell in a starting gate (Fig. 1, yellow box) flanked by food sources to the left and right (Fig. 1, brown slots), to prompt the cell to move in both directions to start out. Once it establishes a preference based on what it finds in each direction, it dedicates its full attention that way. The researchers moved the wily slime through increasingly difficult problems by including variations such as differing concentrations at each reward site. In this way, a straightforward binary problem became a non-binary problem by rewarding the slime's adaptability – once it determined that a given direction was being depleted or was not paying as much as the other direction might, it would turn around and let its memory guide it that way. In applying a series of statistical tools, the researchers were able to break down the cells' problem solving behaviour to a set of algorithms that the cells use to continuously compute their circumstances as they move through their environment. Not bad for a puddle of barked-up barf.

Ain't she a beauty! Dog's vomit slime mold is one of many species that might be smarter than they appear. leftcoastcowboys.com

Although slime molds are a diverse group related to fungi even more distantly than we are, most of us who have cultivated fungi are well aware that fungi too seem to demonstrate problem solving behaviours, such as the puzzle of repatriating an agar plate from a pesky invasive mold colony. One study made use of microetching to demonstrate the maze-solving abilities of a fungus, while another group showed the ability of fungi to adapt their branching growth pattern in response to the surrounding geometry. With microetching scratching its way into research labs and 3D printers becoming as ubiquitous as single-serve coffee makers, you can bet your last pennies* that future experiments will find puzzles even more complex than the ones you put your hamster through as a kid. In the meantime, be sure to check out Chris Reid's fascinating timelapse imagery of slime molds and other curious creatures figuring out their environment.

*Note: pennies are forbidden by law and are not to be used for the trade of goods or services. If you have pennies, return them to your nearest Keurig vendor at once, where they will be used to improve the flavour of their coffee.



Two versions of the experimental setup, a and b. The slime mold starts in the yellow zone and moves in both directions to find food sources placed in 1mm wide slots (brown). After exploring roughly 12 slots the slime mold could determine which was the best feasting direction. Reprinted with permission (Creative Commons License).

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WELCOME NEW MEMBERS

Jocelyn Lalonde
Marlee Loiselle
Allegra Stevenson-Kaplan
Hazel Mason
Tara Kerner

Kent Brothers
North Ross
Shawn Hanson
Paul Heinrichs

For those who no longer wish to be on the SVIMS email list - please follow these steps instead of emailing the listserve:

- Click the link at the bottom of any SVIMS email : http://lists.vifa.ca/mailman/listinfo/svims
- Scroll to the bottom of the page and enter your email address into the "unsubscribe" field

Lobsters and chanterelles from the Cowichan Valley. Photo credit Jeff Laird

Early fruitings have been reported this summer: lobsters, chanterelles and even death caps have been spotted and hungrily devoured (er, except the death caps, we hope). Some were found in early June! The lobsters pictured here were picked in the first week of August. They were firm and delicious, perhaps because they fruited before the fall rains had a chance to soften things up, reports SVIMS mycophile Jeff Laird.

SVIMS EXECUTIVE AND VOLUNTEER POSITIONS 2016-2017

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Past President
Lee Smith
Vice President
Sinclair Philip
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Membership
Jaz Grenier
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Barbara Pendergast
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Ben Hircock
Director / Publicity and Media
Heather Leary
Director / Calendar Editor
Mabel Jean Rawlins
Forays
Adolf & Oluna Ceska
Fungifama Newsletter
Euan Thomson
Thomas Witte
Fungifama Reviewer
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Dianne Humphrey
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Guest Speaker Intros
Juliet Pendray
Cowichan Foray
Pauline Cohen